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THE TELEPHONE SET TAU-1 MB

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To improve the reception and transmission quality, and also for convenience in operation, the handset is provided with a low-impedance capsule telephone transmitter of the MK-10 type and a capsule telephone receiver of TK-47 type, having an impedance of 130 ohms. The individual portions of the handset (transmitter ring, transmitter horn, and a receiver ring) are interchangeable with the equivalent parts of the handset of the wall set of the MB system which is in production at the present time.

The set employs a type TAI-43 inductor, which insures long-time reliable operation. If the driving shaft has a speed of 180 rpm, and if the load resistance is 1,000-3,600 ohms, this inductor delivers to the outside circuit (after first short-circuiting its winding for one second) a power ranging from 1.8 to 2.8 watts.

Tests on an experimental model of the TAU-1 MB set, performed in the production laboratory of the Administration of the Moscow Municipal Telephone Network, have shown that the set meets in its electro-mechanical properties the technical specifications of the Ministry of Communication for the MB system sets. Figure 3 shows the dependence of the output imped impedance of the set on frequency, and Figures 4 and 5 show the reception and transmission frequency characteristics respectively.

The TAU-1 MB sets are subdivided with respect to the electric circuit into sets for parallel connection and sets for end connection. Figure 6 shows the principal diagram of the set intended for parallel connection. The diagram of the set for end connection differs from that given here only in that it does not have a capacitor and that a 1,000-ohm bell is used.

Let us trace the flow of current in the circuit of the TAU-1 MB set.

Subscriber calls central. To call central, the subscriber turns the handle of inductor I, and the inductor current flows through the following circuit: Winding of inductor I, terminal L_1 of the terminal block, first wire, set of calling instruments at the station, second wire, terminal L_2 of the terminal block, contact 2-3 of inductor switch IS, winding of inductor I.

Central can be called with the handset in position or with the handset removed.

Central calling the subscriber. The calling current flows through the following circuit: First wire, terminal L_1 of the terminal box, contact 1-2 of the inductor switch IS, contact 2-1 of lever switch LS, bell B, terminal L_2 of the terminal block, second wire.

Conversation. The incoming conversation current flows through the following circuit: First wire, terminal L_1 of the terminal box, contact 1--2 of the inductor switch IS, contact 2--3 of the lever switch LS, capacitor C, winding II of transformer Tr. receiver T (in parallel with windings III and IV of transformer Tr), terminal L_2 of terminal box, second conductor.

The microphone is fed from a local 3-volt battery over the following circuit: Minus of the battery, terminal "-" of the terminal box, contact 5-4 of the lever switch LS, winding I of transformer Tr, microphone M, terminal "f" of terminal box, plus of battery.

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At the present time experimental models of the TAU-1 MB sets are being tested under operating conditions in the Kalinin, Khot'kov, and Krasnoarmeyskiy municipal telephone networks. The tests produced good results. Favorable reports are received from the subscribers and from the service personnel of the telephone networks concerning these sets.

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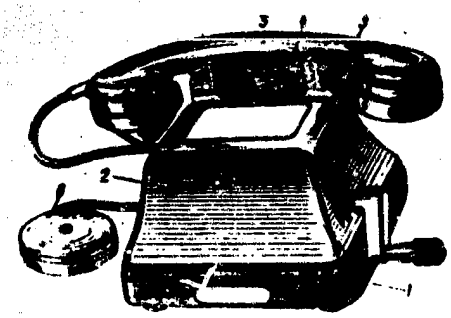

Figure 1

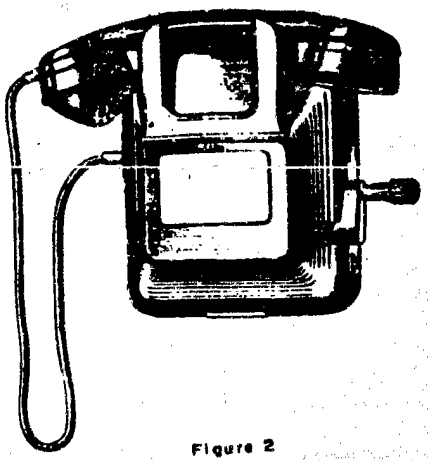

Figure 2

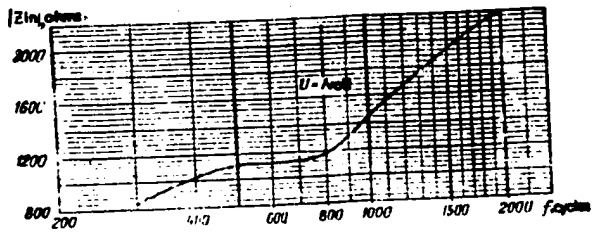

Figure 3

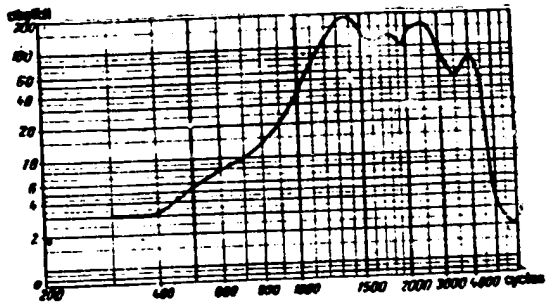

Figure 4

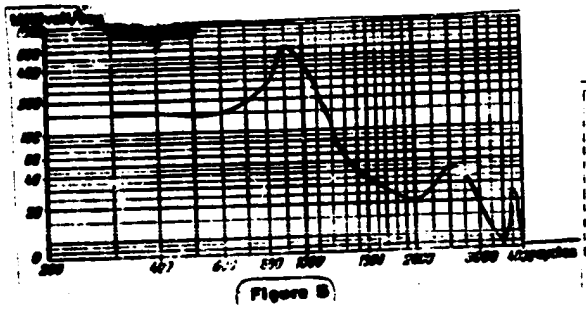

Figure 5

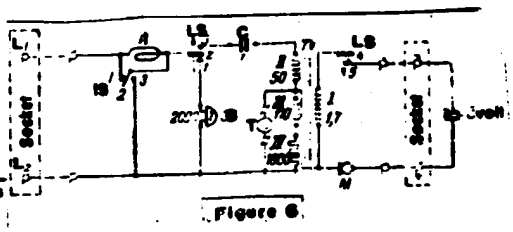

Figure 6

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